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☐	L31	(peripheral device and dynamically mapping and dynamically unmappable).clm.	0
☐	L30	(peripheral device and dynamically mapping and dynamically unmappable).clms.	0
☐	L29	(peripheral device and first request and second request and dynamically mapping and dynamically unmappable).clms.	0
		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ	
☐	L28	((mark and einkauf) or (herbert and ledebohm) or (franck and diard) or (jeffrey and doughty)).in.	34
☐	L27	l24 not l26	168
☐	L26	l22 and l23	3
☐	L25	l22 and l24	0
☐	L24	l21 not (l22 or L23)	168
☐	L23	L21 and peripheral	39
☐	L22	L21 and (demap$5 or de-map$5 or un-map$5 or unmap$5)	21
☐	L21	l18 not l20	225
☐	L20	L18 and (coprocessor or co-processor or co processor)	2
☐	L19	L18 and l12	227
☐	L18	L17 and l5	227
☐	L17	L16 and l3	349
☐	L16	((demap$5 or de-map$5 or un-map$5 or unmap$5 or deallocat$4 or de-allocat$ or unallocat$4 or un-allocat$ or remov$ or delet$5 or eliminat$) ADJ3 (map or maps or translation table or TLB or (translation near2 index$4))).ab,ti,bsum.	599
☐	L15	l13 and L14	291
☐	L14	((unmap$5 or deallocat$4 or de-allocat$ or unallocat$4 or un-allocat$ or remov$ or delet$5 or eliminat$) ADJ3 (map or maps or translation table or TLB or (translation near2 index$4))).ab,ti,bsum.	576
☐	L13	l9 and L12	585
☐	L12	(map or maps or mapping or mapped or translation or tlb).ab,ti,bsum.	277907
☐	L11	l9 and L10	583
☐	L10	(map or maps or mapping or mapped or translation).ab,ti,bsum.	277275
☐	L9	l4 and L8	2524

☐	L8	((unmap$5 or deallocat$4 or de-allocat$ or unallocat$4 or un-allocat$ or remov$ or delet$5 or eliminat$) ADJ3 (map or maps or table or index)).ab,ti,bsum.	6692
☐	L7	l4 and L6	13115
☐	L6	l4 or L5	1665701
☐	L5	(cpu or processor or coprocessor or microprocessor or host)	1661183
☐	L4	l2 and L3	13115
☐	L3	(memory or memories or storage)	3445839
☐	L2	(unmap$5 or deallocat$4 or de-allocat$ or unallocat$4 or un-allocat$ or remov$ or delet$5 or eliminat$) ADJ3 (map or maps or table or index)	26305
		DB=USPT; PLUR=YES; OP=ADJ	
☐	L1	6675262.pn.	1

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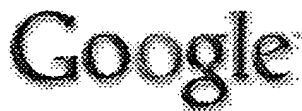
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Abstract

In order to support virtual memory, virtual addresses must be efficiently translated into physical addresses. Traditionally, this dynamic translation has been done in a Translation Lookaside Buffer (TLB) before or in parallel with the cache access, so that the cache is indexed and tagged with physical addresses. However, physical-address caches are either slow or limited in size. To solve this bottleneck, caches can be accessed directly with virtual addresses. Unfortunately, consistency problems add complexity to virtual-address caches. These problems are mostly caused by synonyms and address-mapping changes. In this first part, we

introduce the problems and discuss solutions in the context of single-processor systems. In Part 2 of this two-part series, we will address multiprocessor issues.

○ References   About References | Back to Top

[1] A.J. Smith, "Cache Memories," *ACM Computing Surveys,* Vol. 14, 1982, pp. 473-540.

[2] M. Tomasevic, and V. Milutinovic,, "Hardware Approaches to Cache Coherence in Shared-Memory Multiprocessors, Part 1," *IEEE Micro,* Oct. 1994, pp. 52-59.

[3] E.G. Coffman, and P.J. Denning,, *Operating Systems Theory,* Prentice-Hall Inc., Englewood Cliffs, N.J., 1973.

[4] B. Cantanzaro,, "Multiprocessor System Architectures," Prentice-Hall, Englewood Cliffs, N.J., 1994.

[5] A. Chang, and M.F. Mergen,, "801 Storage: Architecture and Programming," *ACM Trans. Computer Systems,* Vol. 6, No. 1, Feb. 1988, pp. 28-50.

[6] O. Babaoglu, and W. Joy,, "Converting a Swap-Based System to Do Paging in an Architecture Lacking Page-Reference Bits," *ACM Operating System Review,* Vol. 15, No. 5, Dec. 1981, pp. 78-86.

[7] B. Furht, and V. Milutinovic,, "A Survey of Microprocessor Architectures for Memory Management," *Computer,* Mar. 1987, pp. 48-67.

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